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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/902,976

07/11/2001

Nuggehally S. Jayant

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23859

7590

03/29/2006

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EXAMINER

LE, VU

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/902,976

Applicant(s)

JAYANT ET AL.

Examiner

Vu Le

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed November 21, 2005 have been fully considered but they are not persuasive.

Applicant asserts the Sethuraman patent fails to anticipate the scene change detector that classifies pictures as arranged in claim 5. Although applicant's argument is understood, the examiner respectfully disagrees. For example, see column 4, line 13-29 and line 52-65, there Sethuraman discloses the scene change detector 182 that operates a look-ahead based on two frames of sub-GOPs and issues scene change control signals "SCN" and "SCP", from which a picture type control signal "PT" is derived to "classify" a desired frame type (i.e., P-frame or I-frame). Further, see column 3, line 15-23, Sethuraman defines a GOP as comprising a plurality of sub-GOP data structures. Hence, organizing a sub-GOP(s) essentially affects the GOP structure(s). Although Sethuraman expresses the desire to encode an anchor frame as a P-frame rather than an I-frame at special scene change location(s), which would have resulted in closely proximate I-frames, such a situation is an exception, not the rule. Typically, the frame after a scene change is encoded as an I-frame.

Applicant asserts the Sethuraman patent fails to anticipate a scene change detector, in combination with a bit allocation module as required in claim 5. Although applicant's argument is understood, the examiner respectfully disagrees. For example, see figures 1, 2A-2C, column 11, line 37-41, col. 13, line 36-53, there Sethuraman discloses a scene change detector 182, in combination with a rate controller 140. Also,

at "step 262" (see fig. 2B and in details in fig. 2C), a frame is encoded according to the rate control algorithm for adaptively modifying the predetermined group of pictures (GOP) in response to the presence or absence of an information discontinuity (e.g., a scene change).

Applicant asserts the Sethuraman patent fails to anticipate an encoding system as arranged in claim 10. That is, Sethuraman fails to disclose a video encoder, a picture grouping module, and a bit allocation module as recited in claim 10. Although applicant's argument is understood, the examiner respectfully disagrees. For example, see figures 1, 2A-2C, column 3, line 24-27, column 11, line 37-41, col. 13, line 36-53, there Sethuraman discloses an encoding system (100) comprising a combination of a video encoder (104, "dashed" box), a pre-processor (101) which serves as a picture grouping module, and a bit allocation module (140). The video encoder (104) and the pre-processor (101) serve to receive the input video stream (i.e., "IN"). The video encoder (104) also serves to receive an input control stream (i.e., "CD" and "CQ"). The adaptive picture grouping has been discussed above with respect to claim 5 (i.e., modifying GOPs). The adaptive bit allocation among the adaptive picture groupings also has been discussed above with respect to claim 5 (i.e., encoding according to the rate control algorithm for adaptively modifying the predetermined GOPs). The generated encoded video stream is the "OUTPUT FRAMES" at output buffer (160).

For the reasons as discussed above, the rejections have been maintained.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent; or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English.

3. Claims 5-8 and 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Sethuraman et al, US 6,434,196 for the same reasons as set forth in the last Office Action.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sethuraman et al for the same reasons as set forth in the last Office Action.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### **Contact**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is (571) 272-7332. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, James Groody, can be reached on (571) 272-7950. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to be 'Vu Le', with a stylized, cursive-like structure.